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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,095	07/08/2003	Seiichi Yamamoto	FSF-031401	8356

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EXAMINER	
CHEA, THORL	

ART UNIT	PAPER NUMBER
1752	

DATE MAILED: 11/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/614,095	YAMAMOTO, SEIICHI	
	Examiner	Art Unit	
	Thorl Chea	1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *13-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *07082003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 1-4, 7-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language "(a)nd 90 % or more of a total iridium amount within the grain is contained in a core of 50 % or less of the grain" is unclear whether 50 % or less of the 90 % of the total amount of iridium in the grains contained in the core of the grains or otherwise. It is also unclear with rest to the total % of the amount of iridium relative to the amount of metal of groups 3 to 10.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikari (US Patent No. 6,482,583) in combination with Farid et al (US Patent No. 5,747,236) and Publication No. 2000-066325 (PN'325).

Akari discloses a photothermographic material substantially as claimed. The material contains silver halide grains, a non-photosensitive silver salt, a reducing agent and binder, wherein the silver halide grains include core/shell structure having 2 to 4 layers and has in its inside a

coordination metal complex having a metal of group III to XIV in the Periodic Table. See abstract, and column 10 lines 23-68. The most preferred metal including the iridium complex is disclosed in column 11, lines 1-25; the amount of the metal complex added to the grains is within an amount of $1x10^{-8}$ to 10^{-3} per mole of silver (col.12, lines 35-38), and can be added to the reaction system where the grains are formed (col. 12, lines 25-30); the silver halide are chemically sensitized with known chemical sensitizer such as sulfur, selenium or tellurium (col. 13, lines 3-36); the mean of grain size falls within 8 nm to 70 nm (col. 10, lines 18-23).

Farid et al (col. 7 lines 23-67; col. 7, lines 1-51) discloses the doping at any location of the grains, and the optimum region is ranging from 50 to 85 percent of the total silver forming in the grains, and the dopant such as iridium hexacoordination complexes or Ir^{+4} complex is advantageous in reducing reciprocity failure. It also discloses the use of fragmentable electron donor to increase the sensitivity of silver halide emulsion and taught in Farid et al in the abstract, and col. 1, lines 14-15, and known chemical sensitizer including gold sensitizer in column 29, lines 1-19. PN'325 in the abstract discloses silver halide emulsion having metallic compound dopant and iridium compound dopant in combination to provide silver halide material with high illumination, improved off track and reduce fog.

Ikari may not discloses the use of iridium in combination with other metal and doping region in the silver halide grains, but it has been kown in Ikari that the iridium and the other metal are equivalent and PN'325 to use a combination of iridium and a metallic compound to provide silver halide material with high illumination, improved off track and reduce fog. See Ikari in col. 8, lines 41-53, and the optimum doping region is taught in Farid et al. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to dope the

silver halide grains with iridium metal in combination with the its known equivalent with an expectation of reducing reciprocity failure and provide a photothermographic material with good image, storage stability and reduction in fog.

Conclusion

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tchea
October 28, 2004

Thorl Chea
Primary Examiner
Art Unit 1752